

## Cholera nomenclature and nosology: a historical note

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*The term "cholera" appears several times in the Hippocratic writings, and for more than 2 000 years designated ill-defined sporadic gastrointestinal derangements of diverse etiology. When the first pandemic of Asiatic cholera started in 1817, the superficial resemblance of its symptoms to those of "cholera" led to its being given the same name, although there were many objections to this nomenclature and numerous other diagnostic terms were proposed. Some thought that Asiatic cholera was an entirely new disease, while others believed that the old "cholera" had newly become "epidemic". This terminological confusion befogged ideas on the nature and epidemiology of Asiatic cholera for many years, and especially after 1830, when the disease began to spread widely over Europe.*

Before the age of scientific medicine, which can be said to have started less than a century ago, medical terminology was often arbitrary and based on theories of etiology that are now completely obsolete. Nevertheless, it is remarkable that so many diagnostic terms that originated almost 2 400 years ago in the Hippocratic writings have survived today, sometimes with entirely different meanings. An outstanding example of such a term is "cholera". It appears several times in the Hippocratic writings in a sense quite unrelated to modern usage, and also in most subsequent ancient medical works, and until late in the 19th century it continued to be used in senses that are now obsolete. Exactly what disease complex it was supposed to designate was never clear, and different nosographers gave varying definitions of it.

In the Hippocratic *Aphorisms*, III, xxx, "cholera" is stated to be one of the diseases of middle age.<sup>a</sup> It is generally accepted that the word is derived from *χολη*, bile, and *ρειν*, to flow. However, in 1832 the eminent philologist, Emile Littré, was hesitating between this origin of the word and a

derivation from *χολερα*, a gutter.<sup>b</sup> But by 1878 he had made up his mind that the latter etymology was correct.<sup>c</sup> Littré never gave a reasoned explanation of his preference, and the more generally accepted etymology is much more compatible with the Hippocratic humoral pathology that was to last for over 2 000 years.<sup>d</sup>

In the 17th century Thomas Sydenham, internationally known as "the English Hippocrates", coined the term *cholera morbus* to distinguish cholera the disease from cholera as a state of anger—a sense still preserved in the adjective "choleric" as a synonym for irascible. The disease, according to Sydenham, "sets in at the end of the summer and the beginning of the autumn, as truly as the swallow comes in Spring or the cuckoo sings in summer". He adds that it is not altogether unlike the "common cholera of intemperance and drunken-

<sup>b</sup> Littré [E.]. *Traité de choléra oriental, rédigé principalement d'après les documens publiés par les médecins allemands*. Paris, Germer-Baillière, 1832.

<sup>c</sup> Littré, E. & Robin, C. *Dictionnaire de médecine*... Paris, J. B. Baillière et fils, 1878.

<sup>d</sup> As indicated by its title, Littré's 1832 publication was based on second-hand sources. But, by 1878, successive epidemics in France must have made it obvious that the conspicuous feature of cholera was copious watery dejections rather than a disturbance of biliary function. This may well have influenced Littré's philologic reasoning, although it hardly justifies his applying this reasoning to texts written over 2 000 years before Asiatic cholera was known. Contrary to almost universal belief, Littré was not a physician. As he explains in his preface to *Médecine et médecins* (Paris, Didier, 1872), he never passed any examination for medicine or had any medical degree. He had started studying medicine, but had had to abandon his studies for financial reasons on the death of his father in 1827.

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<sup>a</sup> *Hippocrates. With an English translation by W. H. S. Jones*. London, William Heinemann Ltd; New York, G. P. Putnam's Sons, 1931 (Loeb Classical Library), vol. 4.

ness, which may occur at any season . . .".<sup>a</sup> A typical 18th century definition of *cholera morbus* was that of Quincy: <sup>b</sup> "when the Bile so exceeds in Quantity or Acrimony, as to irritate the Bowels and Stomach to eject it both upwards and downwards". In France the term *trousse-galant* was commonly used as a synonym for *cholera morbus*. Sauvages, in his nosology, recognized no less than 11 varieties of "cholera", including those due to the ingestion of poisonous fungi, vitriol, arsenic, and fish roes.<sup>c</sup> At almost the same time, William Cullen classified "cholera" as belonging to the *Class* NEUROSES and the *Order* SPASMI. This *Order* also contained 16 other diseases, including tetanus, epilepsy, pertussis, hysteria, and hydrophobia.<sup>d</sup> A few years later Cullen wrote, with much perspicacity, that

The Nosologists have constituted a Genus under the title of Cholera, and under this have arranged as species every affection in which a vomiting and purging of any kind occur.

It may be noted in passing that the use by Cullen and his contemporaries of the term "neurosis" is as far removed from present usage as is the case with "cholera". Cullen maintained that true "cholera" resulted from "the effect of a warm atmosphere, producing some change in the state of the bile". All other "species" should, he claimed, be referred to the "genus" diarrhoea.<sup>e</sup> It was characteristic of 18th century nosographers that they treated diseases as entities, attempting to group them, as did botanists with plants, into genera and species. But while the classifications of the botanists were based on verifiable morphological characteristics, those of the nosographers had to rely on real or fancied symptomatic or etiological relationships.

<sup>a</sup> Sydenham, T. *The works of Thomas Sydenham, M.D. Translated from the Latin edition of Dr. Greenhill with a life of the author by R. G. Latham, M.D.* London, Sydenham Society, 1848-50, 2 vols. The quotation is from Sydenham's *Observationes medicae*, originally published in 1676. According to Latham, Sydenham regarded this as the third edition of his *Methodus curandi febris* (1666).

<sup>b</sup> Quincy, J. *Lexicon physico-medicum: or, a new medicinal dictionary* . . . , 8th ed. London, T. Longman, 1767.

<sup>c</sup> Sauvages, F. B. de. *Nosologie méthodique, dans laquelle les maladies sont rangées par classes, suivant le système de Sydenham, & l'ordre des botanistes*. Paris, Hérisant le fils, 1771, vol. 3. French translation of the Latin edition of 1768. The original Latin edition appeared in 1763.

<sup>d</sup> Cullen, W. *Nosology. Or, a systematic arrangement of diseases* . . . . Edinburgh, W. Creech, 1800. English translation of the Latin edition of 1769.

<sup>e</sup> Cullen, W. *First lines of the practice of physic. A new edition, corrected and enlarged*, Edinburgh, C. Elliot, 1789, vol. 4.

It must be admitted that traces of the botanical approach linger on in modern medical classifications, especially in dermatology and psychiatry.

#### "CHOLERA" BEFORE 1817

The most complete account of the endemic "cholera" of Europe is to be found in a monograph published by Macpherson in 1872,<sup>f</sup> twelve years before Koch incriminated the vibrio as the pathogen of Asiatic cholera. Macpherson, in total ignorance of the etiology of the Asiatic disease, regarded it as a more acute form of what was then often called "European" or "sporadic" cholera, or *cholera nostras*. For this reason, Macpherson's work is more the history of a word than that of a disease, and he opens with the declaration: "Cholera is one of the most ancient diseases of which distinct descriptions exist". But he continues, paradoxically: "It is a disease that varies a good deal in its manifestations, and it has been variably defined in consequence". Surprisingly, in modern times several eminent authorities have taken at face value Macpherson's preposterous claims as to the existence in Europe before the 19th century of the disease that we now call cholera. Thus, Knud Faber stated that 2 000 Londoners died of cholera in 1667.<sup>g</sup> C.-E. A. Winslow asserted that cholera (without qualification) was one of the diseases that sometimes "assumed epidemic proportions" in 15th century Europe.<sup>h</sup> And, according to René Dubos, there were "well-identified cases of cholera in Europe before the nineteenth century".<sup>i</sup> But, as the greatest of all historical epidemiologists, August Hirsch, pointed out at the fourth International Sanitary Conference at Vienna in 1874, it is "indisputable that before 1817 all countries of the globe, except India and Ceylon, were free of cholera".<sup>j</sup>

Much of Macpherson's monograph is taken up

<sup>f</sup> Macpherson, J. *Annals of cholera from the earliest periods to the year 1817*, 2nd ed. London, H. K. Lewis, 1884. The first edition was published in 1972, but hardly differs from its successor.

<sup>g</sup> Faber, K. *Nosography. The evolution of clinical medicine in modern times*. New York, Hoeber, 1930.

<sup>h</sup> Winslow, C.-E. A. *The conquest of epidemic disease. A chapter in the history of ideas*. Princeton, N.J., Princeton University Press, 1943.

<sup>i</sup> Dubos, R. *Louis Pasteur. Free lance of science*. Boston, Little, Brown, 1950.

<sup>j</sup> *Procès-verbaux de la Conférence sanitaire internationale ouverte à Vienne le 1<sup>er</sup> juillet 1874*. Vienne, Imprimerie impériale et royale, 1874.

by accounts of alleged descriptions of cholera by European colonists of or travellers to the East, but because of the author's failure to distinguish between the diagnostic potpourri that was European "cholera" and the specific disease to which the name is now restricted most of these descriptions are worthless and some are quite clearly not of true cholera. Confusion is worse confounded by the fact that the British in India commonly used the term *mort de chien* or *cramp* to refer to ill-defined pathological manifestations that most 19th century writers took to be synonymous with the equally ill-defined "cholera". The first of these terms was a corruption of a Portuguese word, *mordexim*—in its turn derived from a Mahratta word—which is still to be found in modern dictionaries of the Portuguese language as a synonym for cholera.<sup>a</sup> There were numerous other corruptions of this word, such as *moryxy* and *morxi*, and in his nosology Sauvages refers rather oddly to *merde-chi*.<sup>b</sup>

In 1885 J. Semmelink, a former Surgeon-General of the Army of the Dutch East Indies, published a most critical and scholarly study of alleged early descriptions by Europeans of cholera.<sup>c</sup> He based this work not only on a study of the published literature, but also on a careful examination of 18th century hospital records in Batavia and contemporary ships' logbooks preserved in the *Rijks-Archief* at The Hague. He concluded not only that the so-called cholera in Europe before the 19th century was quite different from the Indian disease, but also that many oft-cited early accounts by Europeans of "cholera" in India and Java were inconsistent with his personal knowledge of the manifestations of the Asiatic and epidemic disease that had since 1830 invaded in several waves most of the civilized world.

Several 19th century writers attribute to a 16th century Portuguese author, Gaspar Correa, the first recognizable description of true cholera in India. The relevant passages were reproduced in English

in 1867 by G. Gaskoin.<sup>d</sup> Correa described a new disease in Goa, which he designates variously as *moryxy*, *mordexy*, and *morexy*. He says that the disease was characterized principally by vomiting and "cramps", that it was fatal in a day or less, and that it attacked large numbers of people at about the same time. Nevertheless, he does not mention diarrhoea, and says that not only men but beasts were affected.<sup>e</sup> In the well-known but extraordinarily scarce work on the "simples" and drugs of India, published in Goa in 1563 by Garcia da Orta, there is reference to a disease called *morxi*. In the English translation of this work by Sir Clements Markham, the preponderant symptoms of the disease are given as a feeble pulse, thirst, and cramps in the legs. There is no mention of diarrhoea.<sup>f</sup> However, in Gaskoin's partial translation of the same work Garcia da Orta is credited with saying that "in both ways a great deal comes from him [the patient], until out of mere want of strength he can expel no more."<sup>g</sup> He mentions as predisposing causes having "much intercourse with women" and eating cucumbers! There was no hint that *morxi* was epidemic.

A French 17th century physician cited by Macpherson and other 19th century writers as giving an early, if imperfect, description of cholera was Dellon, who published in 1685 an account of his travels to and from India.<sup>h</sup> Annexed to this is a *Traité des maladies particulières aux pays et dans la route, et de leurs remèdes* [sic], curiously enough signed "M.C.D.D.E.M."<sup>i</sup> Dellon's travels in India were confined to the west coast and were abruptly brought

<sup>d</sup> Gaskoin, G. *Brit. for. med.-chirurg. Rev.*, 40: 217-232 (1867).

<sup>e</sup> Correa's work, *Lendas da India* (legends of India) is remarkable in that it was published, under the auspices of the Royal Academy of Sciences of Lisbon, in four volumes, in 1858-64—some three centuries after it was written. Modern medical authors who complain of delays in publication may wish to ponder on this.

<sup>f</sup> Garcia da Orta. *Colloquies on the simples & drugs of India*. London, H. Sotheran, 1913. English translation by Sir Clements Markham of *Coloquios dos simples e drogas he cousas medicinais da India compostos pello Doutor Garcia da Orta*, Goa, 1563.

<sup>g</sup> Gaskoin, G. *op. cit.*

<sup>h</sup> Dellon [C.]. *Relation d'un voyage des Indes orientales*. Paris, C. Barbin, 1685.

<sup>i</sup> The title-page of this work does not give the author's first name or its initial. The printed catalogue of the Bibliothèque nationale gives the initial as "C", while that of the British Museum Library gives the first name "Charles". The Library of Congress gives "Gabriel" as Dellon's first name, yet what do the initials "M.C.D.D.E.M." represent if not "Monsieur Charles Dellon, Docteur en Médecine"?

<sup>a</sup> A Portuguese dictionary published in Lisbon in 1939 gives *mordexim* and *mordexi* as synonymous with *cólera-morbo* and a *mordexinado* as one who has been attacked by *mordexim*. Another dictionary, published in Brazil in 1963 (16th edition), gives *cólera-morbo* and *mordexim* as synonyms for *cólera*. It is to be noted that in Portuguese the pronunciation of the letter *x* is similar to that of *sh* in English and *ch* in French. This makes it easier to understand how *mordexim* became corrupted in India to *mort de chien*.

<sup>b</sup> Some familiarity with colloquial French is necessary to appreciate the aptness of this variant.

<sup>c</sup> Semmelink, J. *Histoire du choléra aux Indes orientales avant 1817*. Utrecht, C. H. E. Breijer; Paris, G. Carré; Bruxelles, A. Manceaux, 1885.

to an end when he was charged by the Inquisition with heresy, sentenced to two years' imprisonment in Goa, and banished from India after purging his sentence.<sup>a</sup> Dellon's description of what he calls *mordechi* is inconsistent with a diagnosis of cholera, including among the symptoms fever, a strong but irregular pulse, and urine that was red or white but always clear. Semmelink thought that the disease described by Dellon was probably a form of malaria although, of course, at the time when this suggestion was made the complex etiology and pathology of this disease were still unknown.

An English physician, Fryer, published in 1698 an account of his travels in India, in which he says that the inhabitants of Surat on the north-west coast of that country suffered from *cholera-morbus*. But a little further on he refers, as a different disease, to "*Mordisheen*, called so by the Portugals, being a vomiting with looseness".<sup>b</sup> He makes no reference to epidemics in either case. About a century later, a French traveller to India, Sonnerat, referred to an epidemic disease that he calls "acute flux" (*flux aigu*), and that carried off those who were attacked by it in 24 hours or less.<sup>c</sup> He speaks of an epidemic near Pondichéry that claimed 60 000 victims, who suffered from watery stools, vomiting, extreme feebleness, ardent thirst, and suppression of urine. Those attacked had as many as 30 evacuations within 5-6 hours and were often pulseless, with cold extremities and sunken orbits. Although Sonnerat was writing not from direct observation but from hearsay, the combination of symptoms and epidemicity that he describes makes it very difficult not to believe that he was writing of true Asiatic cholera. However, it is curious that he, as did Fryer with *Mordisheen*, regards *mort de chien* as a different disease, saying that it is the name given in India to "indigestions".

Many 19th century writers cite Girdlestone's description<sup>d</sup> of 1787 as one of the earliest in English

of Asiatic cholera, Macnamara stating in 1876 that this was "an accurate description" of the disease.<sup>e</sup> But in his description of what he calls "spasms", Girdlestone does not even mention diarrhoea, nor does he use the terms *cholera*, *mordexim*, or *mort de chien*.

Probably the first really convincing description of true Asiatic cholera, derived from direct personal observation, is that of a ship's surgeon, Curtis, who gives an account of a small outbreak in the early 1780s among the crew of the British warship "Seahorse".<sup>f</sup> The clinical picture of Curtis includes vomiting, purging of "thin watery matter", prostration, cramps of the belly and extremities, coldness of the limbs, pulselessness, pallor, sunken and hollow orbits surrounded by livid circles, and a fatal outcome within hours of the onset in 5 of the 8 men attacked. Curtis refers to "this spasmodic disease" as *spasmodic cholera*, *cramp*, and *mort de chien*, commenting on these diagnostic terms: "The two last only were employed in this country [India]. How far the first may be strictly appropriate or scientific, is submitted to the judgement of others." The "Seahorse" was lying off Madras at the time, and there is no indication whether it had had contact with the home of cholera in Bengal.

It is clear from contemporary writings that true cholera was not endemic along the Coromandel coast in the 18th century, James Lind declaring in 1768 that the coast of Malabar "is pretty healthy, though inferior in this respect to the coast of Coromandel".<sup>g</sup> Conversely, a contemporary of Lind's wrote 24 years later that cholera was "more prevalent on the coasts of Malabar and Coromandel than in any other part of India".<sup>h</sup> Such a statement is completely at variance with all that can be ascertained about the historical epidemiology of cholera. Moreover, the author of the statement adds that the disease of which he is speaking "seldom terminates fatally".

<sup>a</sup> *Nouvelle biographie générale*. Paris, Firmin Didot frères, 1825-83, 46 vols.

<sup>b</sup> Fryer, J., M.D. *A new account of East-India and Persia in eight letters. Being nine years travels, begun 1672. And finished 1681*. London, R. Chiswell, 1698.

<sup>c</sup> Sonnerat, [P.]. *Voyage aux Indes orientales et à la Chine fait par ordre de Louis XVI, depuis 1774 jusqu'en 1781*. Paris, Dentu, Imprimeur-Libraire, 1806. This is the second edition, the first having been published in 1782.

<sup>d</sup> Girdlestone, T. *Essays on the hepatitis and spasmodic affections in India founded on observations made whilst on service with His Majesty's troops in different parts of that country*. London, J. Murray, 1787.

<sup>e</sup> Macnamara, C. *A history of Asiatic cholera*. London, Macmillan, 1876.

<sup>f</sup> Curtis, C. *An account of the diseases of India, as they appeared in the English fleet at Madras, in 1782 and 1783*. Edinburgh, W. Laing, 1807.

<sup>g</sup> Lind, J. *An essay on diseases incidental to Europeans in hot climates. With the method of preventing their fatal consequences*. London, T. Becket & P. A. De Hondt, 1768.

<sup>h</sup> Clark, J. *Observations on the diseases in long voyages to hot countries and particularly on those which prevail in the East Indies, and on the same diseases as they appear in Great Britain*. London, J. Murray, 1792, 2 vols. The excerpt quoted does not appear in the first edition of 1773, nor does the reference in the title to the "same diseases" in Great Britain.

# "CHOLERA" AS FROM THE FIRST PANDEMIC

It has been seen that up to the end of the 18th century there are hardly any convincing accounts of true cholera in India. Many contemporary writers other than those that have already been mentioned could have been cited, but none gives a plausible description of true epidemic cholera. In most cases the conditions designated by "cholera" is a sporadic diarrhoea and vomiting—sometimes even without the diarrhoea—and doubtless due to many different causes. However, all authorities, contemporary and later, are agreed that the year 1817 was critical for the history of true cholera. It was in that year that there was at Jessore in the delta of the Ganges an epidemic of the disease that was to spread all over India and eventually to extend to the Far East, the Middle East, and, during the second pandemic, to Europe and the Americas. This explosive progression of the new disease or—as some thought—the newly epidemic form of the old disease, was accompanied by an extraordinary proliferation of publications on it. The British medical authorities in Bombay, Calcutta, and Madras published voluminous official reports in 1819,<sup>a</sup> 1820,<sup>b</sup> and 1824,<sup>c</sup> respectively, from which it is evident that the widespread outbreaks were regarded as a phenomenon as unprecedented as it was alarming. In the first of these, the authors concluded that "the epidemic cholera which has raged throughout Hindostan and the peninsula of India since August 1817" was "different in its nature from those that have hitherto been observed". They added that the names *cholera morbus*, *cholera spasmodica*, and *mort de chien* "seem equally inapplicable" to the disease and that, because the biliary system was in no way involved, "we cannot help thinking that its present appellation of cholera must be discontinued". One contributor to the report suggested that the disease should be called either *tetanus epidemicus* or *convulsio indica*. However, in the Calcutta report the conclusion is reached that

The disorder is unquestionably the cholera morbus of Sydenham, the cholera spontanea of Sauvages, the spasmodic cholera, cramp, or *mort de chien* of Curtis . . .

It is nevertheless conceded that "as an Epidemick, the disease is quite new". In the Madras report it is stated that the "generic term, cholera" is consecrated by "universal, and almost immemorial use", and that this is a reason for not rejecting it "even could we propose another, demonstrably better". But the authors do propose that the disease should be renamed *cholera asphyxia*. A few years before, Tytler, a British physician in India, believing the disease to be occasioned by eating spoiled rice, had proposed that it should be renamed *morbus oryzeus*.<sup>d</sup> Annesley, writing in 1825 from his Indian experience, refers to "the cholera of India" and was convinced that "we have no satisfactory proof of the previous existence of a disease in all respects the same as that which has recently ravaged India".<sup>e</sup> Annesley considered epidemically as being the main distinguishing feature between "the cholera of India" on the one hand and on the other "the cholera morbus of Europe" and "the common cholera of India". Christie in 1828 also affirmed that *cholera morbus* and "the cholera asphyxia of Scot" were different diseases, although he conceded that cases of a mixed nature might occur. He proposed that the former disease should be designated *cholera pyretica* and the latter *cholera catarrhalis*.<sup>f</sup> But Orton in 1831 claimed that

It is sufficiently clear that cholera morbus and the usual form of this epidemic are but different degrees of the same disease.

He proposed that the milder form should be called *cholera mitior* and the more severe *cholera gravior*.<sup>g</sup>

As a sidelight to this terminological chaos it may be mentioned that the British in India sometimes referred to the "ricewater" evacuations as "congee" or "conjee" stools. This had not, as might be supposed, any connexion with the French *congé*, but

<sup>a</sup> [Steuart, R. & Philipps, B.] *Reports on the epidemic cholera which has raged throughout Hindostan and the peninsula of India, since August, 1817*. Published under the authority of government, Bombay, 1819.

<sup>b</sup> Jameson, J. *Report on the epidemick cholera morbus as it visited the territories subject to the presidency of Bengal in the years 1817, 1818, and 1819*. Calcutta, Government Gazette Press, 1820.

<sup>c</sup> Scot, W. *Report on the epidemic cholera as it has appeared in the territories subject to the presidency of Fort St. George*. Madras, Asylum Press, 1824.

<sup>d</sup> Tytler, R. *Remarks upon morbus oryzeus, or disease occasioned by the employment of noxious rice as food* . . . Calcutta, 1820, 2 vols.

<sup>e</sup> Annesley, J. *Sketches of the most prevalent diseases of India; comprising, a treatise on the epidemic cholera of the East* . . . London, T. & G. Underwood, 1825.

<sup>f</sup> Christie, A. T. *Observations on the nature and treatment of cholera. And on the pathology of the mucous membranes*. Edinburgh, MacLachlan & Stewart, 1828.

<sup>g</sup> Orton, R. *An essay on the epidemic cholera of India*, 2nd ed. London, Burgess & Hill, 1831.

was derived from *canja*, a word used by the Portuguese in India for rice broth.

#### AFTER TRUE CHOLERA CAME TO EUROPE

When Asiatic cholera first broke out in Moscow in 1830, having slowly travelled overland from India, it was at once realized by all European countries that something as new as it was catastrophic had happened. The disease spread north to St Petersburg and west to Poland (then in a state of insurrection against the Tsar), Prussia, and Austria. Several governments of countries not yet invaded sent medical missions to study the disease in the affected countries. Among these was a British mission to St Petersburg consisting of Dr William Russell and Dr David Barry, and on 31 July 1831 the latter wrote: "I am now quite convinced that neither Celsus nor Sydenham ever saw this disease . . .".<sup>a</sup> A French mission consisting of Dr A. Gerardin and Dr P. Gaimard arrived in St Petersburg on 10 August of the same year. They use only the term *choléra-morbus* in their report, repeatedly insisting that the disease is not communicable.<sup>b</sup> At this time a Scotsman, J. Keir, was the Professor of Pathology, Therapeutics and Clinical Medicine at the Imperial College of Medicine and Surgery. He recognized that the new epidemic disease was quite different from the *cholera morbus* of Sydenham, of which, he says, he had seen only 3 cases in 36 years of practice—one of which was "apparently excited by eating green peas which had not been sufficiently boiled". He added that "cholera" was a name "ill-fitted" to designate the Moscow epidemic, which he regarded as "a species of apoplexy or asphyxia". For this new disease he proposed the convenient name *asphyxia, mephistica, alvi fluxu, epidemica*.<sup>c</sup> A Moscow colleague, F. C. M. Markus, secretary of the Temporary Medical Council that had been established by the Governor-General of Moscow, was of a different view. He regarded the new disease as primarily a cardiovascular affection, and proposed

that it should be named *cardiognus vitalis epidemicus*.<sup>d</sup> As cholera spread from Prussia to other German States, then by sea from Hamburg to Sunderland, England, and in March 1832 from London to Paris, opportunities for first-hand observation of the disease were not lacking. Yet opinions on the relationship between the classical "cholera" of Hippocrates and Sydenham and the "Indian cholera" remained sharply divided. Many were convinced that the two were different diseases. But Craigie of Edinburgh, and others, thought that the old disease had suddenly ceased to be sporadic to become epidemic, and was exhibiting itself "in its most exquisite form".<sup>e</sup> As has already been indicated, those who believed that the epidemic disease was new to Europe rejected the name "cholera", but their alternative proposals differed widely in accordance with their differing notions as to its pathology. Many regarded the sympathetic nervous system, then called the "triplanchnic nerve", as the seat of the disease, and accordingly proposed that it should be called *triplanchnia*. A Portuguese physician refined this term by christening the disease *triplanchnasthenia*.<sup>f</sup> In Sunderland, Clanny believed the disease to be caused by "excess of free carbon" in the blood and the best name for it to be *hyperanthrax*.<sup>g</sup> It would take almost—or perhaps more than—a lifetime to analyse the vast literature of the 19th century on cholera<sup>h</sup> and to compile a complete list of all the names proposed for the disease in accordance with the various speculative etiological notions of their authors.

#### CONCLUSIONS

It is quite clear that as from 1830 Asiatic cholera was an entirely new disease for Europe, and that even in India it was not before 1817 sufficiently widespread or conspicuous to excite any special attention, although it was probably always endemic

<sup>a</sup> Markus, F. C. M. *Rapport sur le choléra-morbus de Moscou*. Moscou, A. Semen, 1832.

<sup>b</sup> Craigie, D. *Elements of the practice of physic, presenting a view of the present state of special pathology and therapeutics*. Edinburgh, A. & C. Black, 1836, vol. 1.

<sup>c</sup> D'Abranches Bizarro, C. J. *Estudo primeiro que sobre a doença (cholera-morbus) tem feito recentemente no hospital real de S. José*. Lisboa, Impressão Regia, 1833.

<sup>d</sup> Clanny, W. R. *Hyperanthrax; or, the cholera of Sunderland*. London, Whittaker, Treacher & Arnott, 1832.

<sup>e</sup> *The Index-Catalogue of the Library of the Surgeon-General's Office*, 1st series, 1882, vol. 3, contains 150 pages listing publications on cholera in the years 1817–81.

<sup>a</sup> Great Britain, Board of Health. *Official reports made to government by Drs. Russell and Barry on the disease called cholera spasmodica, as observed by them during their mission to Russia in 1831*. London, 1832.

<sup>b</sup> Gerardin, A. & Gaimard, P. *Du choléra-morbus en Russie, en Prusse et en Autriche pendant les années 1831 et 1832*, 2nd ed. Paris, F.-G. Levrault, 1832.

<sup>c</sup> Keir, J. *A treatise on cholera, containing the author's experience of the epidemic known by that name, as it prevailed in the city of Moscow in autumn 1830, and winter 1831*. Edinburgh, A. Black, 1832.

in Bengal. For the British in India in the second decade of the 19th century, the devastating epidemics of cholera that overran the country and extended far beyond were an entirely new phenomenon. Some thought the disease to be a newly malignant form of the ancient "cholera"—a diagnostic term covering a multitude of gastrointestinal disorders that were not understood, and sufficiently vague to embrace any new syndrome characterized by diarrhoea and vomiting. Others—more etymology-conscious—objected to the use of "cholera" to designate a disease in which the bile seemed to play no part. As for *cramp*, *mordexim* (and its many variants), and *mort de chien*, a reading of many accounts of the early 19th century leads to the conclusion that most of these referred to sporadic gastrointestinal infections or even nonmicrobial alimentary intoxications. It is clear that this terminological confusion has rendered impossible any accurate history of true cholera in India before about 1817. After that year, the devastating effects of the first and subsequent pandemics of cholera left no room for doubt that the world was faced with an entirely new threat. This was universally recognized—and it could hardly have been otherwise—but, for many, an obsessional preoccupation with the word *cholera* obstructed the perception that the disease was communicable and was always imported from India.

It is remarkable that the "cholera" of Hippocrates and Sydenham survived until well into the 20th century as *cholera nostras* or equivalent terms in other languages. This is particularly the case in Germany, where as late as 1964 *cholera nostras* was given in a medical dictionary as a synonym for endemic diarrhoea and vomiting (*einheimischer Brechdurchfall*). In Sticker's massive monograph on cholera, published in 1912, there are no fewer than 43 pages

devoted to "endemic cholera" (*einheimische Cholera*).<sup>a</sup> If a lesson is to be drawn from the chaotic history of cholera terminology, it is that classification and terminology, which are inseparable, are worthless and may be positively misleading unless built on a sound etiological foundation. To attempt to name and classify pathological conditions on the basis of superficial symptomatic resemblances or speculative notions of pathology is to run the risk of sowing confusion.

It is ironical that the disease now known universally and exclusively as *cholera* was at first denied by many the right to this appellation, whereas the original "cholera" now survives only as a forgotten chapter in medical history. "Malaria" is an illogical and unscientific name, reflecting as it does discredited ideas of pathology, but at least it refers to the disease for which it was originally coined. Medical nomenclature is a strange mixture. The name of a disease may be based on an anatomical site (pneumonia), a poem (syphilis), a physical sign (gonorrhoea), an obsolete pathological theory (hysteria, malaria, melancholia), the name of the discoverer of the pathogen (brucellosis, leishmaniasis), the name of the pathogen itself (leptospirosis), or the name of the place where the disease was first observed (Lassa fever). The name "cholera" is doubly illogical, for it represents not only an obsolete pathological theory but also a theory that had no reference to the disease that it now designates. As the *Lancet* stated almost 144 years ago, in the issue dated 19 November 1831, "cholera" as applied to the Asiatic disease is an "absurd denomination".<sup>b</sup>

<sup>a</sup> Sticker, G. *Abhandlung aus der Seuchengeschichte und Seuchenlehre*, Bd. 2. *Die Cholera*, Giessen, A. Töpelmann, 1912.

<sup>b</sup> *Lancet*, 1: 256 (1831–32).

## RÉSUMÉ

### NOMENCLATURE ET NOSOLOGIE DU CHOLÉRA: UNE NOTE HISTORIQUE

Le terme « choléra » apparaît à plusieurs reprises dans les écrits d'Hippocrate et a été utilisé ultérieurement dans la littérature médicale jusqu'à la fin du 19<sup>e</sup> siècle pour désigner un ensemble mal défini de troubles gastro-intestinaux sporadiques d'étiologie multiple. Étymologiquement, le terme est probablement dérivé du grec *χολή* (bile) et *ρεῖν* (couler). Sauvages, au 18<sup>e</sup> siècle, dans sa « Nosologie méthodique... », ne distingue pas moins de 11 variétés différentes de choléra. La propagation explosive du choléra asiatique à partir du Bengale en 1817,

provoquant la première pandémie, et surtout son extension à l'Europe et aux Amériques au début des années 1830, lors de la deuxième pandémie, vont amener une prolifération tout aussi remarquable des publications concernant la maladie. Les symptômes du choléra asiatique ressemblant à première vue à ceux de l'ancien « choléra », deux théories sont avancées, comptant un nombre quasi égal de partisans: pour les uns, la maladie était nouvelle en Europe; pour les autres, il s'agissait de l'ancien « choléra » lequel, ayant acquis une allure épidé-

mique, se manifestait « sous sa forme la plus exquise ». Ceux qui pensaient qu'il s'agissait d'une affection nouvelle ont créé à cette occasion de nombreux termes de diagnostic, différant suivant l'idée qu'ils se faisaient de son étiologie. Néanmoins, l'ancienne dénomination « choléra » a prévalu, mais le 20<sup>e</sup> siècle était déjà bien avancé lorsque le terme a finalement été appliqué à la seule

maladie asiatique spécifique. Ce désordre terminologique a été pendant de nombreuses années à l'origine de confusions quant à la nature et à l'épidémiologie du choléra asiatique, et, au 20<sup>e</sup> siècle, a amené d'éminentes personnalités du monde médical à croire erronément à l'existence d'épidémies de choléra asiatique en Europe bien avant 1830.

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